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ABOUT THE COVER

"Redhead" by Robert D. Dorman, 760½ 11th St., Marion, Iowa 52302. Interested readers may contact the artist for information regarding signed and numbered limited edition prints.

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★ ★ ★ SPECIAL NOTICE ★ ★ ★

Effective January 1, 1976 the subscription rates of the Iowa Conservationist will be increased. This is the first increase in rates since August of 1970. The revenue realized from subscriptions has never paid for production of the magazine but an increase in all phases of printing costs as well as higher costs in mailing have made an increase necessary to offset some of this deficit.

In July of 1974 we changed our format to include four-color photographs. We have appreciated the favorable response from our subscribers and hope that even at our new rates all of our readers will continue to enjoy the magazine. Subscription applications received before January 1, 1976 will still be accepted at the old rates. The new rates will be: 1 year - $2.00; 2 years - $3.00; 4 years - $5.00

— The Editors

COUNTY BOARD LAKES

COOPERATION TO PROVIDE PUBLIC HUNTING

By Robert Middendorf

IS THERE a county conservation board lake within close driving distance of your home? For residents of many Iowa counties this is a reality, or will be, as 98 of the 99 counties have established boards. Collectively they have purchased or constructed 92 water impoundments, and others are being planned. These bodies of water vary biologically from gravel pits to highly productive lakes, and range in size from 1 to 300 surface acres.

County conservation boards and fisheries personnel of the State Conservation Commission work together to ensure the best fishing possible from county-owned lakes. A majority of the technical fishery management work and fish stocking is handled by the State Conservation Commission. The counties carry out many programs designed to improve the lakes themselves and therefore the fishing. Lake construction, algae control, riprapping for shoreline protection and cage rearing of channel catfish are a few projects carried out by counties to improve and maintain good fishing in their lakes.

Continued

Photos by Jerry Leonard

Fish Stocking

FOR NEW OR RENOVATED WATERS, fish stocking is the first step in developing a desirable sport fishery. To allow hatcheries sufficient time to produce the needed fish, planning for the correct numbers and species of fish is done one year prior to stocking. Channel catfish, largemouth bass, crappie and bluegill are the fish species most often stocked in county conservation board fishing lakes.

Catfish reproduction and use of small fish stocked from hatcheries cannot maintain good catfishing in lakes with established fish populations. The small catfish are just too easily preyed upon by larger fish. So good catfishing is maintained by stocking larger fish. To do this, the State Conservation Commission initiated a cooperative cage rearing program with county boards. The State Conservation Commission supplies the catfish, provides technical information and periodically samples fish to determine proper feeding rates. County boards purchase material and construct the cages used for rearing purposes, purchase feed and then feed the fish during the period catfish are reared in cages. This program has been successful in providing excellent catfishing in approximately 30 county board lakes.

Stocking bluegill, crappie, and largemouth bass is not necessary once their populations become established. These species are able to reproduce and maintain their own populations without supplemental stocking.

Fish Surveys

PERIODIC SURVEYS of county lakes are used to monitor changes occurring in fish populations. Through use of various types of fish sampling gear and laboratory instruments, biologists are able to determine age, growth, condition, and abundance of fish present in a lake. If necessary, corrective measures are taken to improve poor fishing.

Creel surveys determine fish caught by anglers and are another means of evaluating a fishery. This method, the actual contact with fishermen, is one of the best methods of determining the quality of fishing a lake is providing. Creel surveys were used on several county board lakes and results indicated that up to 90 percent of the catfish stocked from cages are caught by fishermen.

Renovation

SITUATIONS ARISE where lake fishery populations become drastically out of balance; some species overpopulate and become stunted. To correct these problems county boards have participated with state personnel to selectively eliminate overabundant populations by chemical renovation. Some of these lakes are: Wilson (Taylor), Pioneer (Page), Arrowhead (Pottawattamie), and Nelson (Crawford) Counties. Complete renovations by draining lakes have been accomplished at Easter (Polk) and Moss (Washington) Counties. Following complete renovation, fish are restocked at densities to provide a balanced desirable population.

Aquatic Vegetation

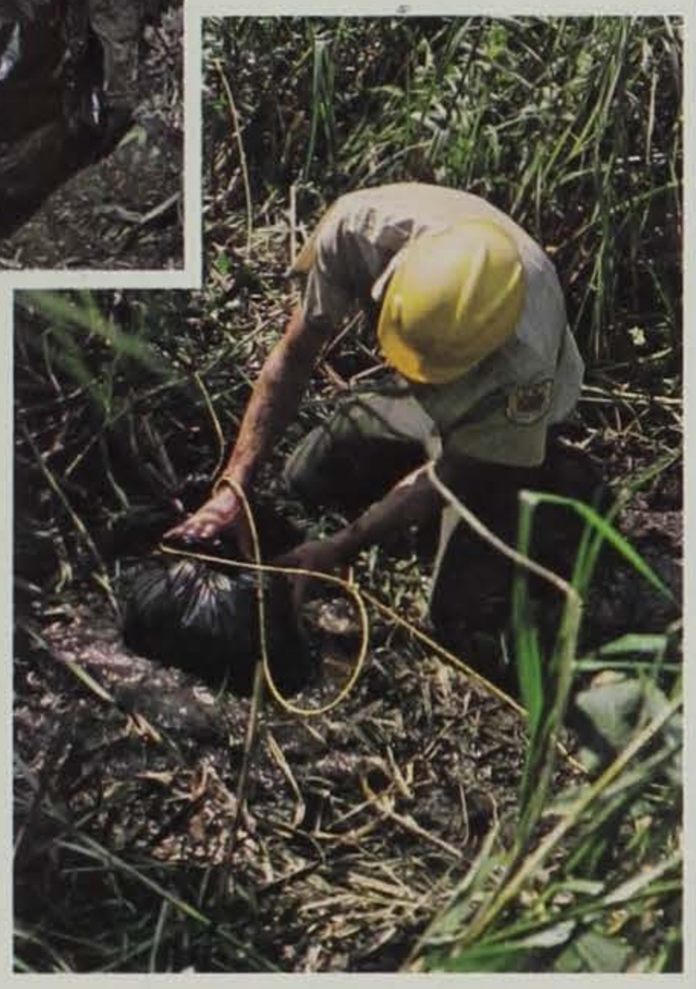
EXCESSIVE DENSE GROWTHS of aquatic vegetation are considered undersirable in lakes for boating, swimming, and fishing. To the angler it hinders activity by making boat fishing difficult and restricts him from using many areas of a lake; therefore decreasing chances for fish harvest success. Excessive growths also affect fish populations by providing a means of shelter for small fish to escape predation (bluegill and crappie). This allows large numbers to survive and slow growing or stunted populations result thereby throwing the lake out of balance.

At lakes having vegetation problems, many county boards have embarked on control programs. Application of chemicals designed to eliminate aquatic vegetation and not harm fish is the most practical, effective, and widely-used method for control. County boards at Dog Creek (O'Brien), Nelson (Crawford), Smith (Kossuth), Briggs Woods (Hamilton), Hickory Grove (Story), Marion (Marion), Spring (Green), Kent (Johnson), Hannen (Benton), and Hickory Hills (Black Hawk) are some lakes where control has been affected. In some instances lake water levels are lowered in the fall and held down over winter. This exposes the vegetation to freezing and drying out at areas above the water level. Where lakes are refilled in the spring retarded growths of vegetation are received.

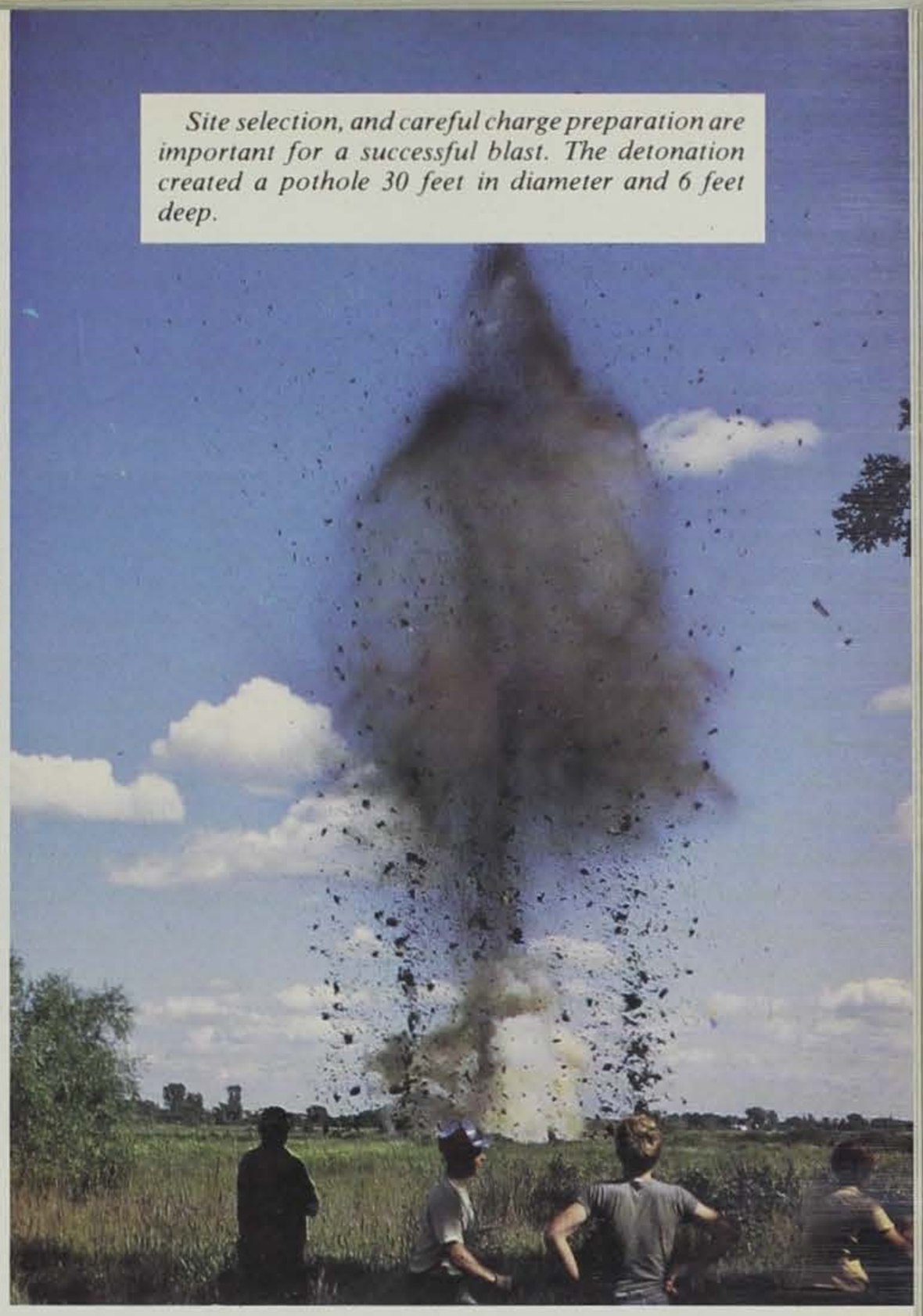
Habitat Improvement

THE HABITAT (natural environment) for fish is the water and structure of a lake when impounded. To maintain or improve habitat various county boards have effected programs on their lakes. Elimination of excessive aquatic vegetation growths previously mentioned is one form of improvement. In other instances productive cover is lacking and devices are located in lakes to concentrate fish for enhancing angler harvest success. These devices might be brush piles, stake beds or old tires, all of which are weighted and placed on the lake bottom. Roberts Creek (Marion), Easter (Polk), and Kent (Johnson) are some lakes where county boards have implemented these practices.

Large areas of shallow water, plus shoreline erosion and siltations which contribute to allowing growths of aquatic vegetation to exist, are generally poor sites for fishing. To improve on these situations, Kent (Johnson), Central (Jones), and Easter (Polk) County Boards have deepened shorelines by use of excavating equipment and dirt was used to construct jetties that protrude out into the lakes. The shorelines and jetties were riprapped and are popular fishing areas as they allow the angler to utilize deeper water and better lake structure. □



Photos by the Author



Site selection, and careful charge preparation are important for a successful blast. The detonation created a pothole 30 feet in diameter and 6 feet deep.

Instant Wildlife Habitat

By Jim Zohrer
Wildlife Management Biologist

FOR YEARS, wildlife managers have recognized the value of small potholes for wildlife watering places and for waterfowl habitat. It has only been in recent years that high power, low cost, explosives have been used to improve wildlife habitat in wetland areas. Pothole blasting has been carried out effectively on many of our State owned wildlife areas and on private lands.

Blasting can be used to create small open water potholes in areas which may be too wet for the use of heavy equipment. The cost of blasting a pothole is also much less than that of digging one with earth moving equipment. The cost of the materials necessary to blast one pothole 35 feet in diameter and six feet deep is approximately $30.

Most of the pothole blasting being carried out in Iowa has been done using a blasting agent made up of a mixture of ammonium nitrate and fuel oil. A small amount of dynamite is used to detonate this mixture. A number of these charges can be connected in a series to create potholes with large diameters or special shapes.

Care must be taken in choosing possible sites for pothole blasting. Potholes can be blasted in areas which will catch runoff water or in areas which have a water table at or near the surface of the ground. Areas to avoid include fluid boggy soil which will flow back into the pothole, and locations through which water is flowing. Holes blasted in these sites will rapidly fill with sand or silt and the resulting pothole will be very short lived.

When choosing a pothole location it is important to select a site which is at least ½ mile from any buildings. Rocks and other fallout materials will travel a considerable distance from the blast site, and the shock produced by the explosion can crack windows up to ½ mile away. You must also avoid overhead power or telephone lines, buried cables and pipelines.

It is important that all legal requirements and safety precautions be met during the blasting operation. Pothole blasting should only be attempted under the supervision of properly qualified individuals. Many of the wildlife management biologists located throughout the state are familiar with this type of blasting. They are available to offer advice and assistance in wetland improvement and in the preparation of an overall wildlife management plan for an area. For the address of the biologist in your area write your Iowa Conservation Commission, 300 Fourth Street, Des Moines, Iowa 50319. □

Upland Game Forecast For 1975

Photos by the Author

By Ronnie R. George
Wildlife Research Biologist

Pheasants

TO MOST UPLAND GAME HUNTERS in Iowa, the ring-necked pheasant is something special. His flashing colors, thrashing wings, and rakish laughter as he rises above the cornstalks is a vision which occurs with ever increasing frequency in the minds of Iowa's 300,000 pheasant hunters as our seasons begin. What will these hunters find when they take to the field in November? Well, I've got some good news and some bad news. First, the good news: pheasant hunting in three-quarters of the state should be at least as good as last year. The Conservation Commission's annual August roadside pheasant survey indicates that, statewide, this has been the most productive year for pheasants on record. Ninety-five percent of the pheasant hens observed during the survey period (August 1-15) had a brood of chicks accompanying them; this compares with only seventy percent for last year. The August survey also revealed that the highest numbers of pheasants, and presumably the best hunting, this year will be in the east-central and southwestern portions of the state. Now for the bad news: twenty-five counties in northwest Iowa had shown a seventy-two percent decline in their pheasant populations since August of 1974. As you recall, a severe blizzard lashed this region during January of 1975. This blizzard along with other foul weather and an acute lack of suitable nesting habitat have dealt the legendary ring-neck a grevious blow. What does the future hold for pheasants in this area of the state? I predict that there will be a partial recovery of the pheasant population in northwest Iowa within a year or two, but undisturbed nesting cover and high quality winter cover are very limited in this region of intensive agriculture, and a complete recovery of the pheasant population in this area may never occur unless there are some major land use changes. As bad as it looks, the serious pheasant hunter should realize that there will be isolated pockets of good hunting available within the blizzard zone this season if he is willing to work for his birds.

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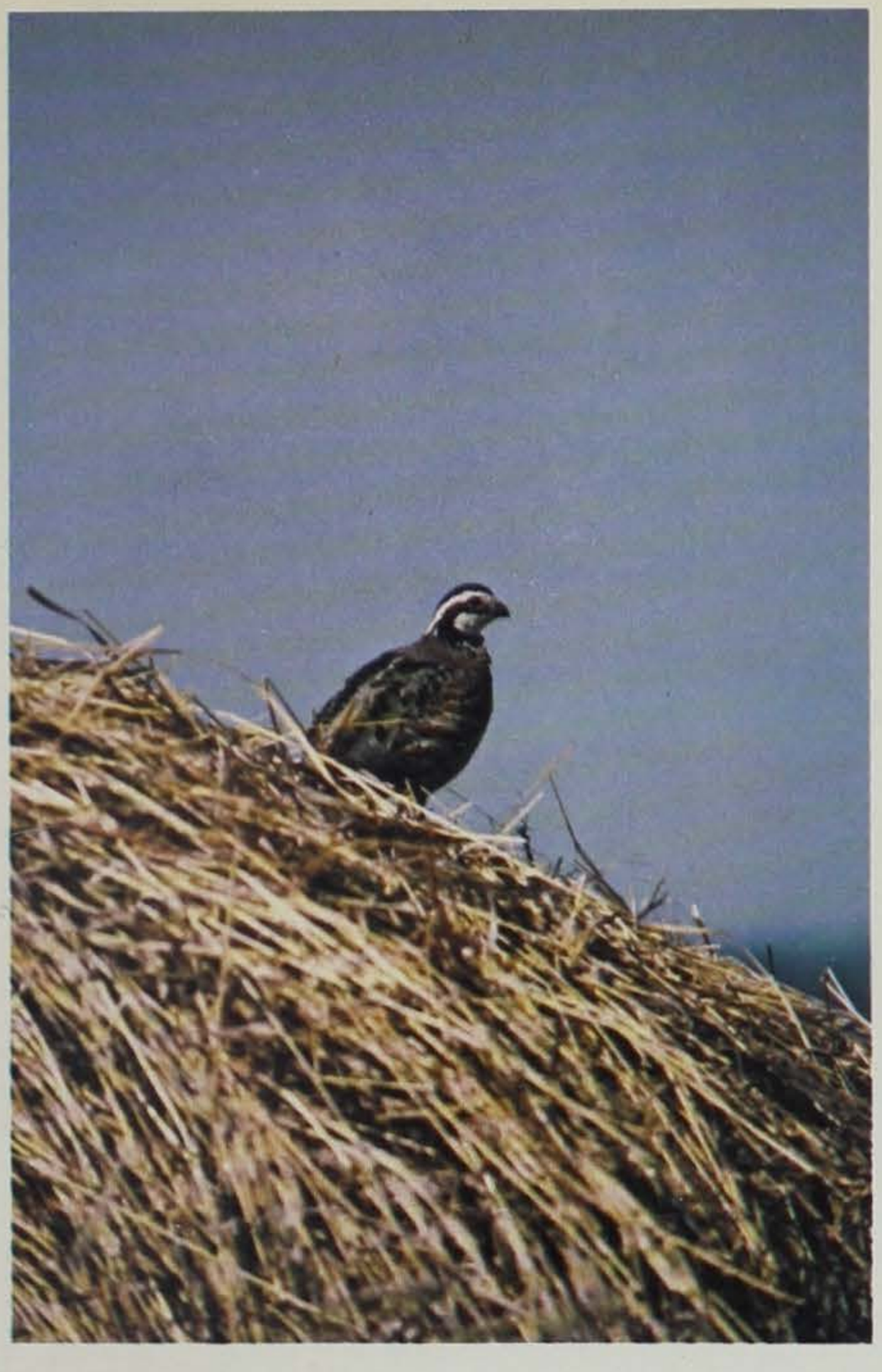


Quail

IN MY OPINION, quail hunting represents upland game hunting at its best. Its carefully nurtured traditions, specialized jargon, and emphasis on quality dog and gun work have made quail hunting a truly remarkable sport.

The feathered explosion known as the bobwhite quail has experienced a good reproductive season this year. August census figures indicate that the quail population, statewide, is up more than ten percent from last year. This is good news indeed for Iowa's 100,000 quail hunters who have been impatiently waiting for that first point and the first heart-stopping covey rise on opening day, October 25. As most upland game hunters know, Iowa is located near the northern limit of the bobwhite's range, and quail populations are pretty much limited, by climate, to the southern half of the state. The southern two tiers of counties in Iowa have traditionally been our best quail hunting region, and southwestern Iowa looks especially good for quail hunting this fall.

Gray Partridge

THE GRAY PARTRIDGE, known to most hunters as the Hun or Hungarian partridge, appears to be in good shape this year. The Commission's August census data shows that gray partridge populations are up more than six percent from last year in the twenty-nine counties in northwest and north-central Iowa which we classify as partridge range. Practically all of this range was hit by the same January blizzard which so drastically reduced northwest Iowa's pheasant population this year, but gray partridge seem to require less cover and tolerate severe wind chill conditions better than pheasants, enabling them to survive where pheasants could not.

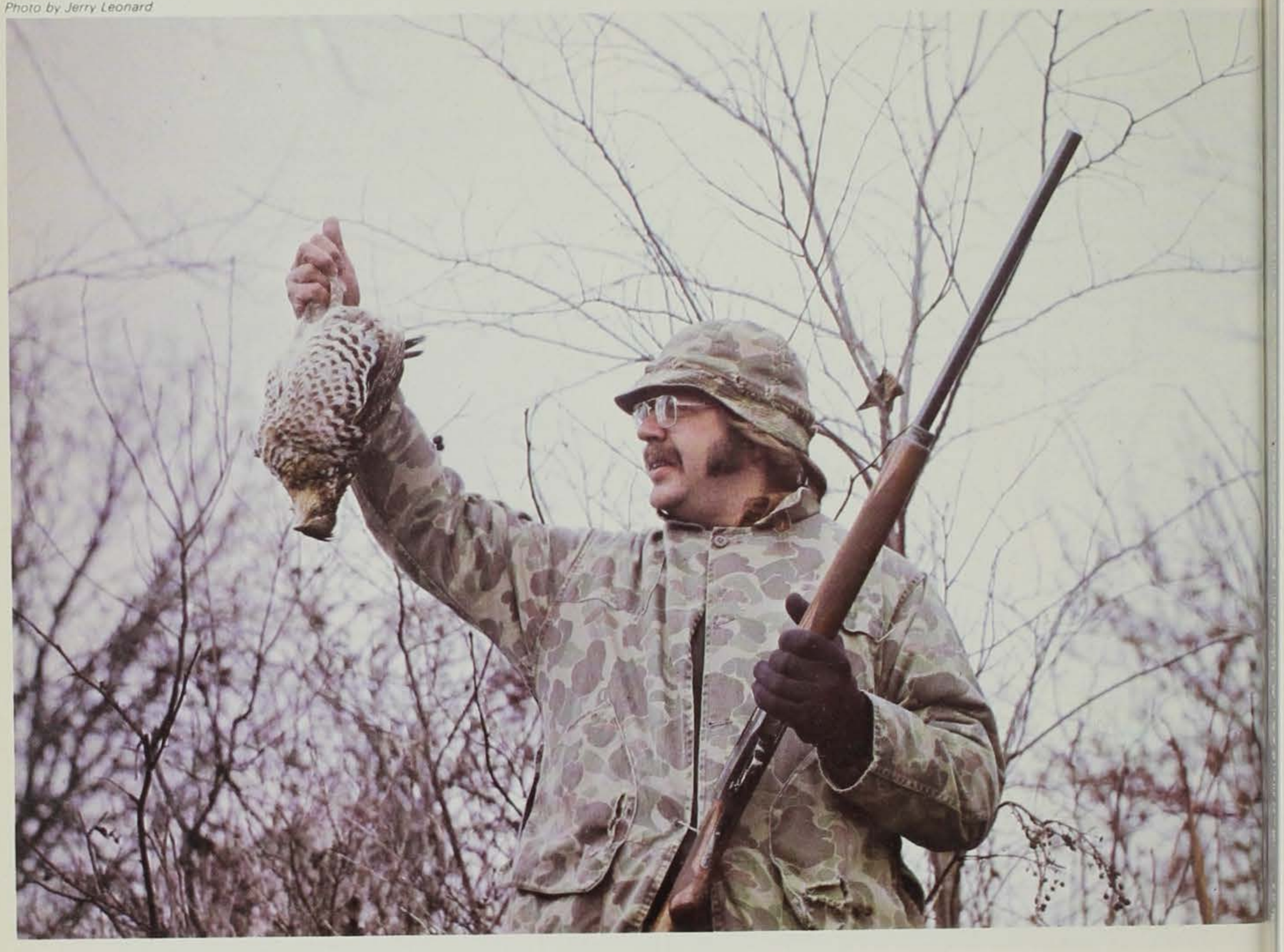
Partridge season opens on November 8, and at least 25,000 Iowa hunters are expected to take to the field in search of this tough import from Eurasia. The gray partridge has become increasingly popular with northern Iowa hunters in recent years because of its relative abundance and sporty qualities. But be prepared for a different kind of upland shooting. Partridge don't hold well for pointing dogs, and the covey usually stays together when flushed making it difficult to pick up singles. Coveys observed in the open are usually wary and quite difficult to approach. Experienced partridge hunters will tell you that the birds can best be located by working grass waterways and weedy cover, and fast, long-range shots are the order of the day.

Cottontails and Jackrabbits

NO DISCUSSION OF UPLAND GAME HUNTING in Iowa would be complete without a few words about North America's number one game animal, the cottontail rabbit. Old powder puff may not be as aristocratic as a quail or as showy as a pheasant, but he has kept many a hunter from going home with an empty game bag. Rabbit season opened on September 6, and approximately 200,000 sportsmen are expected to hunt rabbits in Iowa this year. August census figures indicate that cottontails are down nearly fourteen percent, statewide, since 1974. Blizzard conditions in northwest Iowa coupled with heavy livestock grazing in southern Iowa may have contributed to this decline.

White-tail jackrabbits have been gradually declining in Iowa for more than ten years, but this year our data shows a forty-seven percent annual increase in jackrabbit numbers. While few upland game hunters would claim to specialize in jackrabbit hunting, many pheasant hunters and even fox hunters are happy to add old long ears to their game bag.

Photo by Jerry Leonard



Late Season Bonus

By Terry Little
Forest Wildlife Biologist

THE TWO HUNTERS left their car parked in a field driveway shortly after sunrise on a cold, clear December morning and began working their dogs along a brushy field edge. There was no action for several minutes as the dogs burned off their excess energy and worked out the kinks from a long car ride. The men built up a light layer of sweat which would keep them warm all morning. Suddenly, the dogs' tails began wagging excitedly as the tracks of a half-dozen birds became visible in the light powder snow which had fallen the night before. Both dogs froze on point at the same instant, but a small flock of birds flushed anyway in an explosion of brown and gray feathers. They were gone from sight before either hunter could squeeze off a second shot. Both men exclaimed loudly at what they thought were clean misses, but one dog soon returned with head held high carrying a dead bird which otherwise may have been wasted. After praising the dog for its diligence, the men continued on, anticipating another brief burst of action which both knew might be over before they had time to react.

Sounds like a typical quail hunt in southern Iowa, doesn't it? Or perhaps a trip after pheasants? But this party was hunting ruffed grouse in northeast Iowa's rugged hill country. Since 1968 when the first ruffed grouse hunt was legal in Iowa, the grouse season has traditionally closed in late November and an early winter hunt would have been impossible. This year, however, the Conservation Commission has extended the season until January 4th to allow avid grouse hunters a chance at this sporty bird when grouse hunting is at its best. The opportunity to trace birds in the snow and the fact that grouse tend to congregate around available winter food supplies combine to give the hunter who is willing to climb ridges and walk sidehills in the snow his best chance at bagging one of Iowa's most challenging game birds.

The ruffed grouse (**Bonasa umbellus**) or "partridge" or "timber pheasant" is North America's most widely distributed game bird, occurring in timbered areas north of the Ohio River nearly to the Arctic Circle and continent-wide across Canada. Iowa's grouse range in Allamakee, Clayton, Winneshiek and Dubuque counties lies on the southwestern fringe of the bird's prime habitat, the Great Lakes states and the southern half of the Canadian provinces of Alberta, Manitoba, Ontario and Quebec. In these areas, grouse are most abundant where dense stands of 10 to 40 year old forest are interspersed with mature stands of aspen or "popple." The high densities of shrubs and saplings associated with young timber provide grouse with protection from the hawks and owls that are their primary predators, while aspen buds are a highly nutritious food source which allow them to survive the harsh winters that dominate 6 to 8 months of the year in much of their range. In Iowa, where winters are somewhat milder, the birds seem to survive well without an abundance of aspen, although scattered pockets of "popple" are found throughout the northeastern counties. The extent that our grouse rely on this tree for winter food is not known, but it could be more important than is currently thought. It may be more than a coincidence that the southern edge of grouse range in Iowa closely coincides with the southernmost distribution of aspen.

In the northern states, grouse populations go through a pronounced "cycle" with spring breeding densities as high as one bird per 4 or 5 acres occurring in the best habitats at roughly 10-year intervals. Peaks in numbers such as this are followed by 3 or 4 years of rapid decline until spring densities are as low as 1 bird per 100 acres. The population then begins building again to another peak. The causes of this cycle are not known, but increasing populations seem to be associated with abundant aspen bud crops, mild winter temperatures and the presence of 12 inches or more of soft snow, which allows birds to burrow until they completely disappear from sight. Burrowing in snow provides protection from predators and insulation from cold night-time temperatures. Decreasing grouse numbers are associated with the opposite combination of food availability and weather conditions. Spring grouse densities in Iowa seem to be much more stable than those in the cyclic states, reaching neither the fantastic highs or lows described above. About one grouse per 20 acres seems to be typical of much of the better areas in northeast Iowa. The absence of both very abundant winter food supplies and extremely harsh winter weather may contribute to this stability.

Grouse populations are able to increase rapidly because of their high reproductive potential. In the spring, each male grouse selects a log within the area of forest that he claims as his own and performs one of the most unusual breeding displays known. The male perches on his log and begins rapidly fanning his wings as if he were going to take off in flight. Instead of flying, however, he produces a hollow thumping sound much like an old John Deere tractor trying to start, or someone beating on a kettle drum. This "drumming" activity serves to keep other males out of his territory and attracts females for mating. Female grouse begin nesting in April and bring off a brood of 8-11 chicks in early June. By the end of the summer the average brood still contains 3 or 4 young birds, which means grouse numbers can double or triple from spring to fall. Losses to predators and severe weather are heavy, however, with a 50 percent fall-to-spring decrease being normal, even on unhunted areas. Thus harvesting up to 50 percent of the population, and hunting both sexes, has little effect on subsequent grouse numbers. Since grouse hunting is still somewhat of a specialist sport engaged in by few Iowans, it is highly unlikely that hunting has any effect on our grouse population. Only the most experienced hunters reach their bag limits of 3 birds daily and 6 in possession.

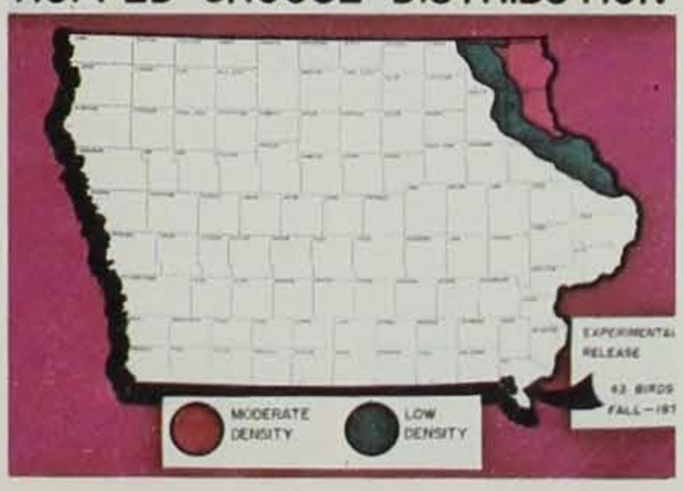
The Conservation Commission uses the drumming behavior of male birds to determine changes in grouse numbers from year to year. Each spring wildlife biologists drive ten 15-mile routes in northeast Iowa, stopping at 1-mile intervals to count the number of males drumming during a 4-minute period. The average number of drums heard per stop is used as an index to the number of males attending drumming logs that year. These index values have changed little over the past 14 years, averaging about 1.2 drumming birds per stop, which led to the conclusion that the Iowa grouse population is fairly stable. They also suggest that our populations are similar to those in northern states during the middle phase of their cycle.

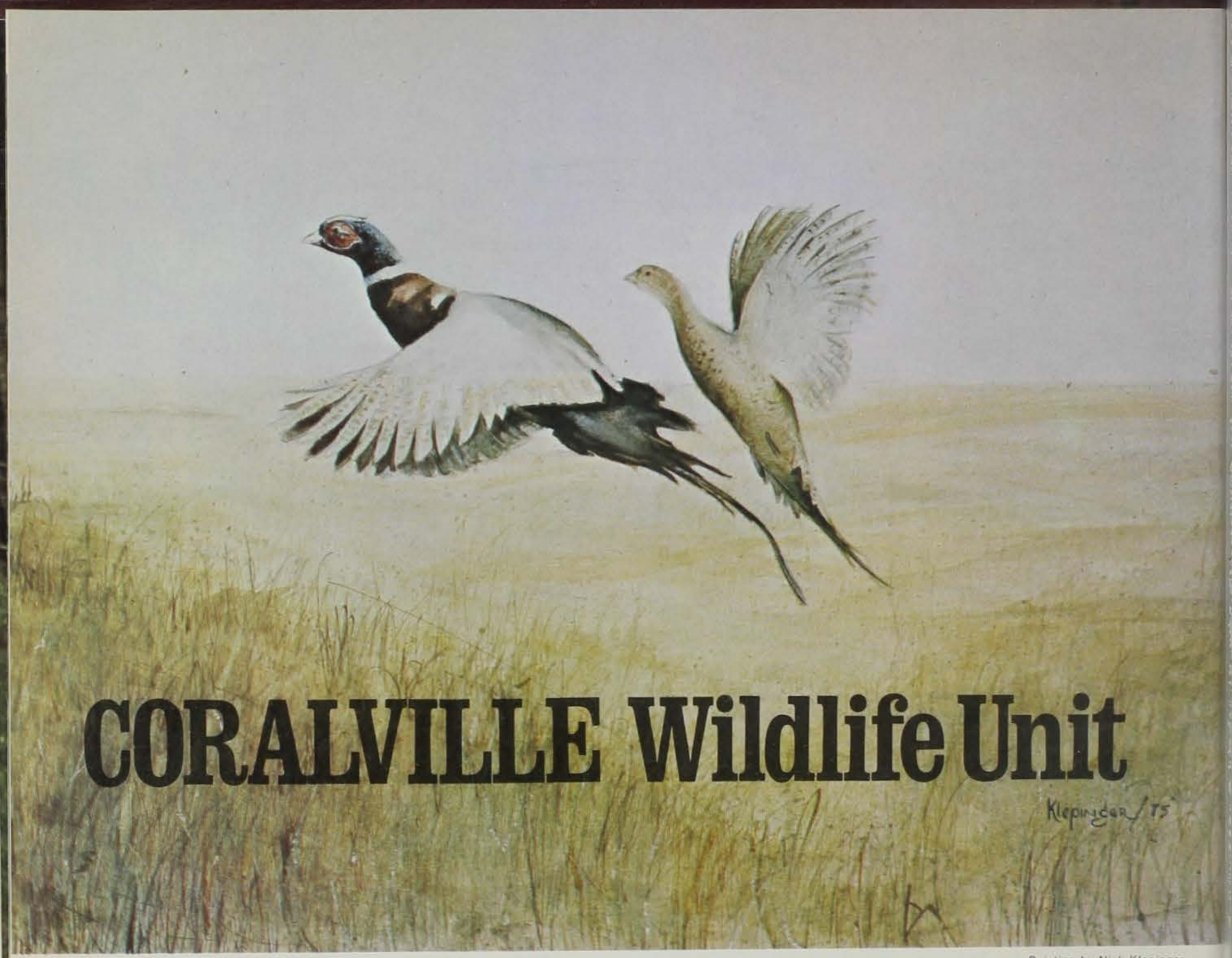
Hunters contribute information on fall grouse populations by completing questionnaries about how much they hunt and how successful they are. They also send wings and tails from birds they harvest to Commission biologists, who are then able to determine changes in age and sex ratios of the fall population by measuring certain feathers, which tend to be larger on males and older birds. Results from the questionnaire indicate that the average grouse hunter hunts 2 or 3 days per season for a total of 11 to 12 hours, flushes about one bird per hour, kills a grouse for each 5 hours of hunting and bags 2 or 3 birds for the season. Hunters using dogs seem to do better than those without, because the dogs flush twice as many birds and certainly retrieve more cripples.

Hunters seeking grouse for the first time would do well to concentrate their efforts on certain types of forest. Although nearly one-third of the land area in our grouse range is forested, the birds tend to concentrate along the timber fringes adjoining agricultural land on the ridge tops. The steep slopes and pastured valley bottoms seldom contain many birds. Dense, ungrazed stands of young timber are difficult to hunt, but will consistently yield more birds to the hunter than other types. The edges of mature timber will also contain birds, particularly if some of the berry-producing shrubs like dogwood, rose or hawthorn are present. Grouse feed mainly on these berries, seeds, and the leaves of plants which remain green into the fall, especially clover. In December birds will band together in small flocks in dense stands of hazel and aspen where buds are abundant. Young timber stands and woods edges are good places to find this combination of food and cover plants, especially if they occur on south-facing slopes where the birds can sun themselves on bright winter days.

Late season grouse hunting does present an excellent opportunity for the dedicated upland game bird hunter to get in some last good licks for the year. If you are tired of walking cornfields and sloughs after pheasants or quail, why not take a crack at some of the most challenging bird hunting Iowa has to offer? When you are sliding down a ridge with your arms tangled in brush just as a bird flushes behind a thicket of trees, and it swerves out of sight before you can extricate yourself, you'll know you are in grouse country. But few experiences will match the satisfaction of getting your limit of this brown bundle of energy with the uncanny ability of disappearing through the trees before you even realize he is there. □

RUFFED GROUSE DISTRIBUTION





Painting by Nick Klepinger

By Don Pfeiffer

THE CORALVILLE WILDLIFE MANAGEMENT UNIT is made up of five counties in eastern Iowa. These are Cedar, Clinton, Johnson, Scott and Washington counties. The land is chiefly agricultural with expanses of class I farm land in all counties. Urban interests surround the cities of Davenport, Clinton and Iowa City.

The topography ranges from expanses of level land to rough broken areas bordering the rivers and those larger streams flowing into them. The hills along the rivers rise abrubtly and are often rough for two to three miles until the upland plain is reached.

Soils are drift, loess, terrace, swamp and bottomland. Loess soils are most extensive covering three-fourths of the area. Swamp and bottomland make up nine percent of the Unit.

Five rivers pass through this Unit. These include the Skunk, English, Iowa, Cedar and Wapsipinicon rivers. Because these rivers are at the lower end of their watersheds, spring flooding is an annual occurrence. All of the land in this Unit drains into these rivers or into the Mississippi River in the case of some areas of Clinton and Scott counties.

Agriculture is chiefly cash grain involving corn and soybeans. All counties have beef and pork feeding operations. Where livestock is involved more oats and hay crops are harvested. Clinton and Washington counties have land better suited to livestock production than other counties in the Unit.

Timber stands have decreased significantly since the pioneer period. Most of the timbered areas have been cleared and, where cultivated, serious erosion has taken place. Timber resources exist only in scattered woodland stands usually associated with rougher land. The floodplains and rough land adjacent to the major rivers and stream tributaries make up 80 percent of existing timber.

It is quite apparent that because of the steep and broken topography a forestry improvement program should be maintained. From a long term use standpoint several thousand acres of land will need reforestation to control erosion.

Two state lakes are found in this Unit. Lake MacBride in Johnson county provides a 1,000 acre water area. Lake Darling in Washington county offers 400 acres of water recreation. Both areas serve as refuges for waterfowl and the land within the state park boundary is not open to hunting or trapping. County conservation boards maintain some lakes and these provide local recreation. Farm ponds offer additional water areas and wildlife related activity. Privately owned ponds in each county are estimated as follows: Cedar 110, Clinton 180, Johnson 207, Scott 60 and Washington 305.

The Coralville Reservoir is a flood control reservoir operated by the U.S. Army Corps of Engineers. At normal summer pool elevation 5,000 acres of water is present for recreation. The federal government owns 24,000 acres, of which only 3,500 acres are not subject to flooding.

Only two large marsh areas are found in the Unit. These are the Goose Lake marsh in Clinton county and the Princeton Wildlife Area in Scott county. Both of these marshes are state-owned.

Most of the flat-land pothole marshes have been tiled and drained. Agricultural crops are grown in these areas today. Old river oxbows

and floodplain sloughs provide locally important marsh areas. Most of these areas are privately owned and provide a variety of wildlife.

With the consistant ecotype and latitude of this Unit there is no major species differentiation. Big game species include the wild turkey and whitetail deer.

Wild turkeys were stocked along the western border of Johnson county in 1974. As the population increases, there will be an expansion of turkeys within favorable habitat along the Iowa river. Turkeys also will be stocked in the future in certain areas along the Skunk river in Washington county and the Wapsipinicon river in Clinton county.

Whitetail deer populations thrive in the scattered woodlots along the wooded streams and on the upland along the rivers. Deer have increased under recent management in this Unit. Farm game include ring-necked pheasant, bobwhite quail, cotton-tailed rabbit, and fox and grey squirrels. These are found in good populations where habitat persists in every county.

Wood ducks are the principle waterfowl specie nesting in the Unit. They are found along all rivers, larger streams, oxbows, wooded marshes and some ponds. Mallards and blue-winged teal also nest in certain locations.

Waterfowl species observed in the fall and spring are those species indigenous to the Mississippi Flyway. More waterfowl are seen in Scott and Clinton counties because of their proximity to the Mississippi River.

Furbearer populations are good in this Unit. The woods adjacent to the rivers and streams afford excellent habitat for raccoon, mink, fox and other furbearers. Trappers and hunters enjoy their particular sports as they seek out the furbearing mammals.

The ring-necked pheasant is the most sought after game animal in this Unit. Fall populations have been compared with the highest densities found in the United States. Quail and cottontail rabbits are present in rough and brushy habitat. Fox and grey squirrels are abundant in the timbered areas.

Secure nesting cover is the limiting factor in this Unit for pheasant, quail, and rabbits. Intensive agricultural practices have reduced the amount of oats, hay and idle grassland which formerly was present. Animals are forced to nest in less favorable roadsides and fencerows. Nests in these locations provide predators with an easy meal and nesting success is below 20%.

Where nesting cover is adequate, high populations of upland game animals will be found. The majority of these animals are produced here, and are therefore found present during the hunting seasons. Permission to hunt on these private lands must be secured. Landowner tolerance is very good for those hunters who ask. The Unit's proximity to the citizens of metropolitan areas such as Iowa City, Cedar Rapids, Davenport and Clinton creates tremendous hunting pressure on opening hunting weekends.

Waterfowl are hunted mainly in and along the rivers in this Unit. A few farm ponds offer excellent waterfowl harvest sites. Harvested cropfields provide field hunting for snow, blue, and Canada geese. Mallard ducks are also hunted in cornfields, especially late in the season.

Whitetail deer are found in good numbers. Deer in this Unit experience heavy hunting pressure. The population remains very young and healthy because of the hunting pressure. Through proper regulation and an emphasis on preserving existing timber resources, the whitetail deer will expand its population here.

With the large amount of rough land present, furbearers provide an added feature to hunting opportunity. Raccoon hunters enjoy following their hounds to tree this animal. Predator calling is effective on red fox and coyotes.

The Wildlife Management Biologist is located in the Johnson county ASCS Office Building, Box 2206, Iowa City. He is available to answer questions concerning biological manipulation on the State Game Management Areas and to provide technical assistance to landowners seeking to improve wildlife habitat on their land.

Maintenance on the Unit and habitat development for Unit areas is initiated from the Headquarters area of the Hawkeye Wildlife Area in Johnson county. The Conservation Technician, residing on the area, is available to discuss ongoing projects on the Unit areas. □

Jerry Leonard

Jerry Leonard

Jerry Leonard

Ken Formanek

Photo by Lee Gadfelier

Wayne Bills' all time Iowa record rack ranks high on North American list.

Record Racks

NEW ALL-TIME IOWA RECORD DEER RACK heads up a fine list of entries from the 1974 deer season. Wayne A. Bills of Des Moines took a buck with a typical rack via shotgun which scored 199 ⅝ to top all previous entries. Bills trophy buck ranks 5th or 6th, depending upon final results, in the world records maintained by the Boone and Crockett Club.

In order to enter your trophy it must be legally taken with bow and arrow or shotgun – muzzleloader within Iowa boundaries. If the rack meets minimum scoring standards you qualify for a certificate and a colorful shoulder patch in recognition of your feat. Unentered deer taken in past seasons as well as the present are eligible for entry. To have the rack officially measured simply contact the Iowa Conservation Commission, Information and Education Section, 300 4th Street, Des Moines, Iowa 50319. After we receive notification, we will forward a name of an official scorer who may be contacted. Because of shrinkage in varying degrees when antlers dry out, they cannot be officially measured for at least 60 days from time taken.

The scoring system used for Iowa records is identical to the Pope and Young and Boone and Crockett Clubs. The Pope and Young Club maintains scores for archery killed deer while Boone and Crockett keeps records for big game legally taken with firearms.

The four following classes with minimum scores for each will receive recognition:

Shotgun - Muzzleloader		Archery	
Typical	150 Points	Typical	135 Points
Nontypical	170 Points	Nontypical	155 Points

Name

*Wayne A. Bills
Dennis Vaudt
Randall Forney
Austin Watters
Henry Rolland
Bob Boydston
Wilber Holverson
Pete Harkin
Howard Willis
Kenny Tietsort
Norman Hayek
Russel DeHaat
Duane H. Fick
Dwayne Pavelka
Donald Atwell
Walter F. Heun
Arlin Brynsaas
Wendell Woldruff
Jerome Schakel
Dale Clayton
Robert Foland
John Mugge
LaVerne Anhalt
Bernard Welsh
Darrel Carlson
Charles A. Olson
Dan Massick
Ronald J. Flink
Tom Lanigan
Millard Nelson, J
Doyle Kramer
Gary Lawrence
Darrell Hayes
Dale Allen
Carroll M. Adam
Tim Bruns
Bill Hanken
Dalton H. Hoover
Richard Sanford
Chester Forry
Jim Schmitz
Terry Huff
Ronald Eblen
Paul E. DeJong
Ken Hanson
Keith Gass
Bill Siemens
Chuck Cox
Douglas Oberfoell
Keith Erickson
Lloyd Klein
Patty Brink
Norman Dean
David B. Ford

Name

Duane Fick
Ronald R. Hoyt
Gary Mitchell
Larry Dierks
Gene Bartlett
Gerald Bailey
Linda Salter
Richard L. Phillip
Cliff Waller
Harold Haag
Frank Sconzo
Paul Witzman
Dean G. Davis
Emerson Crampt
Paul Heidebrink
Dennis H. Hoove
Daryl Teach
Mark A. Schonhe
Jim Risdon
Frank Quigley

*New State Record

Record Racks Measured in 1974

SHOTGUN TYPICAL
(Minimum Qualifying Score--150 Points)

Name	Address	Year	County Taken	Total Score
*Wayne A. Bills	Des Moines	1974	Hamilton	199 5/8
Dennis Vaudt	Storm Lake	1974	Cherokee	190 2/8
Randall Forney	Glenwood	1971	Fremont	186 2/8
Austin Watters	Ottumwa	1974	Van Buren	183 6/8
Henry Rolland	Washington	1969	Van Buren	178 4/8
Bob Boydston	Des Moines	1974	Polk	177 2/8
Wilber Holverson	Soldier	1966	Monona	172 5/8
Pete Harkin	Cumming	1963	Madison	171 6/8
Howard Willis	Woodbine	1953	Harrison	169 1/8
Kenny Tietsort	Battle Creek	1974	Harrison	169
Norman Hayek	Clutier	1974	Monroe	166
Russel DeHaai	Monroe	1974	Marion	165 6/8
Duane H. Fick	Des Moines	1967	Madison	163 1/8
Dwayne Pavelka	Mt. Vernon	1974	Linn	163 1/8
Donald Atwell	Melrose	1973	Lucas	162 6/8
Walter F. Heun	Ft. Dodge	1969	Union	162 2/8
Arlin Brynsaas	Decorah	1974	Winneshiek	162
Wendell Woldruff	Griswold	1973	Cass	161 3/8
Jerome Schakel	Pella	1973	Monroe	160 7/8
Dale Clayton	Glenwood	1974	Mills	160 6/8
Robert Foland	Thayer	1974	Union	160 1/8
John Mugge	Cedar Falls	1974	Clayton	159 7/8
LaVerne Anhalt	Waverly	1974	Bremer	159 5/8
Bernard Welsh	Waukon	1974	Allamakee	159 4/8
Darrel Carlson	Storm Lake	1974	Cherokee	159 1/8
Charles A. Olson	Waverly	1974	Chickasaw	158 3/8
Dan Massick	Tracy	1974	Marion	157 6/8
Ronald J. Flink	North Liberty	1974	Sac	157 2/8
Tom Lanigan	Jesup	1973	Allamakee	156 6/8
Millard Nelson, Jr.	Clermont	1974	Fayette	156 5/8
Doyle Kramer	Aplington	1974	Butler	156 2/8
Gary Lawrence	Ackley	1974	Warren	156 1/8
Darrell Hayes	Prole	1963	Guthrie	156
Dale Allen	New London	1965	Henry	155 7/8
Carroll M. Adams	Ellston	1974	Ringgold	155 2/8
Tim Bruns	Adair	1974	Madison	153 6/8
Bill Hanken	Monticello	1974	Jones	153 5/8
Dalton H. Hoover	Guthrie Center	1974	Guthrie	153 4/8
Richard Sanford	Monticello	1974	Jones	153 2/8
Chester Forry	Ionia	1970	Butler	152
Jim Schmitz	Greeley	1964	Clayton	151 5/8
Terry Huff	Moravia	1971	Monroe	151 4/8
Ronald Eblen	Creston	1974	Union	151 3/8
Paul E. DeJong	Pella	1974	Monroe	151 2/8
Ken Hanson	Hampton	1974	Franklin	151 2/8
Keith Gass	Carlisle	1970	Marion	151 1/8
Bill Siemens	Forest City	1974	Hancock	151 1/8
Chuck Cox	Delmar	1974	Clinton	151
Douglas Oberfoell	Dubuque	1974	Buchanan	150 6/8
Keith Erickson	Dayton	1965	Webster	150 5/8
Lloyd Klein	Mason City	1974	Cerro Gordo	150 4/8
Patty Brink	Onawa	1974	Monona	150 1/8
Norman Dean	Bettendorf	1973	Henry	150
David B. Ford	Lake City	1968	Calhoun	150

SHOTGUN NONTYPICAL
(Minimum Qualifying Score-170 Points)

Name	Address	Year	County Taken	Total Score
Duane Fick	Des Moines	1972	Madison	228 2/8
Ronald R. Hoyt	Bagley	1974	Guthrie	196 1/8
Gary Mitchell	Monona	1974	Allamakee	190 6/8
Larry Dierks	Clinton	1974	Jackson	187 3/8
Gene Bartlett	Montrose	1974	Lee	182 7/8
Gerald Bailey	Salem	1971	Henry	182 1/8
Linda Salter	Mondamin	1974	Harrison	180 2/8
Richard L. Phillips	Cedar Falls	1974	Chickasaw	177 3/8
Cliff Waller	Dubuque	1974	Van Buren	177 5/8
Harold Haag	Orient	1974	Adair	177
Frank Sconzo	Centerville	1974	Appanoose	176 6/8
Paul Witzman	Atlantic	1974	Cass	175 1/8
Dean G. Davis	Denison	1974	Harrison	174 5/8
Emerson Crampton	Vail	1974	Harrison	174 4/8
Paul Heidebrink	Spirit Lake	1974	Dickinson	174
Dennis H. Hoover	Guthrie Center	1974	Guthrie	173 3/8
Daryl Tesch	Manly	1974	Mitchell	173 1/8
Mark A. Schonhoff	Dubuque	1974	Dubuque	170 3/8
Jim Risdon	Ainsworth	1973	Van Buren	170 3/8
Frank Quigley	Sioux Rapids	1974	Clay	170 1/8

*New State Record

BOW AND ARROW TYPICAL
(Minimum Qualifying Score-135)

Name	Address	Year	County Taken	Total Score
Gary Wilson	Cherokee	1974	Cherokee	175 4/8
Jack Douglas	Creston	1974	Union	173 2/8
Brad Vonk	Des Moines	1974	Warren	168 5/8
Carl Theobald	Muscatine	1974	Des Moines	158 2/8
Howard Goettsch	Eldridge	1974	Scott	150 4/8
Jerry Geoghegan	Muscatine	1974	Muscatine	150 3/8
Jim Harris	Percival	1974	Fremont	145 2/8
John Kozak	Maquoketa	1974	Clinton	144 3/8
David Bollei	Tiffin	1974	Des Moines	140 1/8
Norman Dickman	Decorah	1974	Winneshiek	139 5/8
Russell Severyn	Woodbine	1974	Harrison	139 3/8
John Dykes	Swan	1973	Polk	137 6/8
Lance Brauer	Des Moines	1974	Polk	136 3/8
Michael Burgess	Onawa	1974	Monona	136 1/8
Dick Hall	Hamburg	1974	Butler	135 6/8
Joseph Colsch	New Albin	1974	Allamakee	135 4/8

BOW AND ARROW NONTYPICAL
(Minimum Qualifying Score-155 Points)

Name	Address	Year	County Taken	Total Score
Bill Erwin	Sioux City	1966	Woodbury	202 5/8
Richard Rekemeyer	Maquoketa	1974	Jackson	186 1/8
Dan Bueller	Donnellson	1974	Lee	169 3/8
Robert Filbrandt	Dows	1974	Franklin	167
Douglas Seltz	Clare	1974	Webster	165 7/8
Jeff Lowers	Atlantic	1973	Cass	156 3/8

IOWA ALL TIME TOP TEN RACKS
SHOTGUN TYPICAL

Name	Address	Year	County Taken	Total Score
Wayne A. Bills	Des Moines	1974	Hamilton	199 5/8
George L. Ross	Ottumwa	1969	Wapello	195 1/8
Dennis Vaudt	Storm Lake	1974	Cherokee	190 2/8
Randall Forney	Glenwood	1971	Fremont	186 2/8
Marvin E. Tippery	Council Bluffs	1971	Harrison	185 1/8
Wayne Swartz	Bedford	1967	Taylor	183 7/8
Austin Watters	Ottumwa	1974	Van Buren	183 6/8
Henry Rolland	Washington	1969	Van Buren	178 4/8
Bob Boydston	Des Moines	1974	Polk	177 2/8
Craig Field	Burlington	1967	Des Moines	175

SHOTGUN NONTYPICAL

Name	Address	Year	County Taken	Total Score
Larry Raveling	Emmetsburg	1973	Clay	271 2/8
Carrol Johnson	Moorhead	1968	Monona	250 4/8
Duane Fick	Des Moines	1972	Madison	228 2/8
LeRoy Everhart	Sumner	1969	Van Buren	224 4/8
Donald Crossley	Hardy	1971	Humboldt	221 4/8
John Meyers	Council Bluffs	1969	Pottawattamie	218 3/8
Dick Johnson	Missouri Valley	1964	Harrison	213 7/8
John Ashbacher	Waukon	1973	Allamakee	209 1/8
Stan Harrison	West Union	1973	Fayette	202 2/8
Bruce Guy	Brighton	1973	Washington	202 1/8

BOW AND ARROW TYPICAL

Name	Address	Year	County Taken	Total Score
Lloyd Goad	Knoxville	1962	Monroe	197 6/8
Gary Wilson	Cherokee	1974	Cherokee	175 4/8
Gordon Hayes	Knoxville	1973	Marion	175 1/8
Jack Douglas	Creston	1974	Union	173 2/8
Ardie Lockridge	Amana	1965	Iowa	172 2/8
Bob Fudge	Burlington	1966	Des Moines	170 4/8
Brad Vonk	Des Moines	1974	Warren	168 5/8
Loy J. Booker	Clinton	1963	Clinton	166
Norman r. Bell	Burlington	1971	Des Moines	164 4/8
Leonard Allard	Oskaloosa	1973	Mahaska	163 6/8

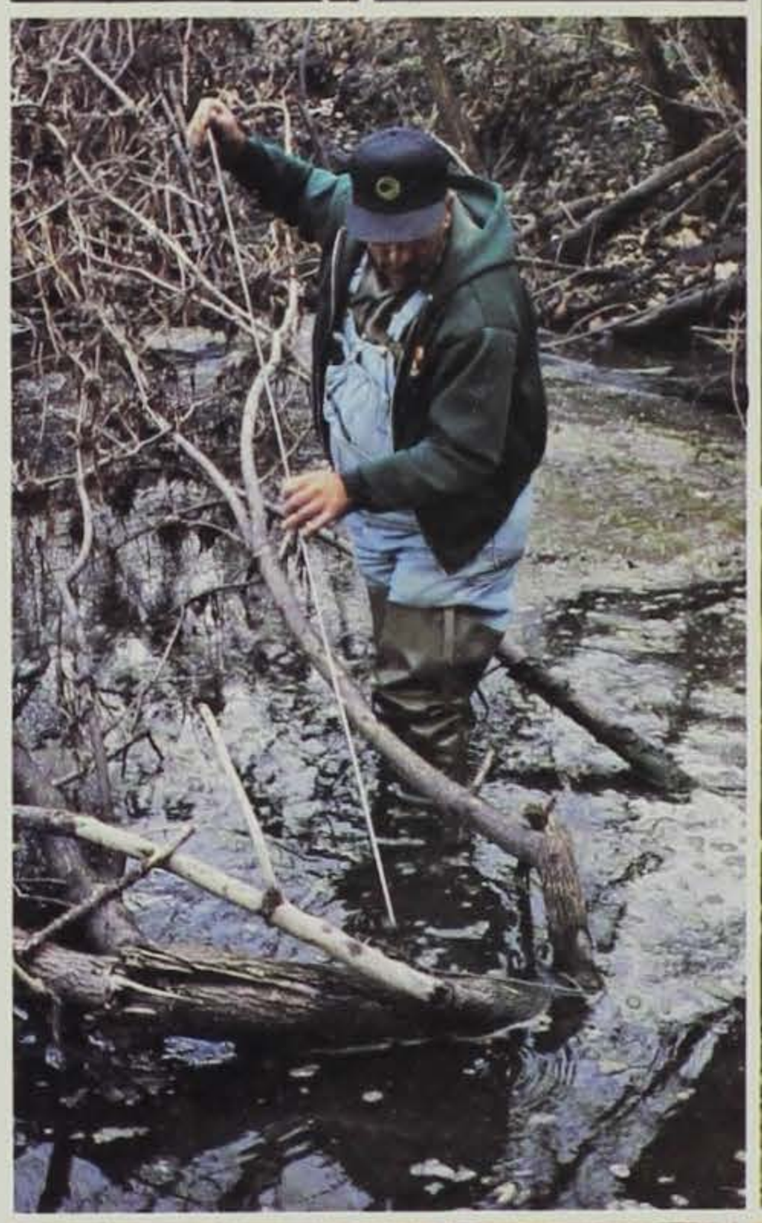
BOW AND ARROW NONTYPICAL

Name	Address	Year	County Taken	Total Score
Blaine Salzkorn	Sutherland	1970	Clay	216 3/8
Bill Erwin	Sioux City	1966	Woodbury	202 5/8
Dennis Ballard	Iowa city	1971	Johnson	197 4/8
Richard Rekemeyer	Maquoketa	1974	Jackson	186 1/8
LeRoy Spiker	Harpers Ferry	1968	Allamakee	183 4/8
H. F. Nelson	Iowa Falls	1964	Hardin	181 3/8
Dan Mueller	Donnellson	1974	Lee	169 3/8
Gordon Vrama	Davenport	1967	Scott	167 6/8
Robert Filbrandt	Dows	1974	Franklin	167
Bob Oden	Waukon	1971	Allamakee	166 4/8

Probing For "Snappers"

By Wendell Simonson
Conservation Officer

Photos by the Author



PEOPLE WHO HAVE LEARNED to harvest some of nature's outdoor bounty, seem to enjoy their out-of-doors time through the whole year. Spring and fall mushroom hunters, those who gather walnuts and hickory nuts in fall, and those who pick berries and wild fruits during the summer months, have found these pursuits to be fun—with an additional reward of some fine eating.

For several years I had heard of "probing" for snapping turtles. In fact I had eaten turtle meat on several occasions, and found it to be very good. I wanted to find out more about it, so I checked with several local people who advised me of a local farmer who was pretty good at turtle probing. When I contacted this man, a genial farmer with a good, solid Bohemian background, he "allowed" he could help but I had to keep secret his best turtle creeks and areas—mushroom hunters are the same way!

In late fall, when the corn picker is put away and the fishing rods are hung up, this man heads for the small creek areas with his turtle probe. The probe is nothing more than a 6-foot piece of well pump rod with a small knob pounded out on one end and a short, sharp hook on the other end.

Beginning with cold weather in late November and December, the big snappers bury themselves in the muddy bottoms of creeks, prepared to spend the winter under the ice. By using the knob end of the rod to probe within the mud and water, he can tell by sound and feel when he has a turtle located. The turtle shell, when tapped, will sound almost like a water-soaked log, whereas a rock will sound metallic—takes a bit of practice. It's hard work, and out coats are soon hanging on a tree branch.

By probing a bit with the rod, he can soon determine the position of the turtle. He then takes the hook end of the rod and jams it under the edge of the turtle shell, and jerks the turtle out of the mud and water. If the weather is real cold, they are quite lethargic, but if there is a warm spell, they become quite active. At this stage, you gingerly grab the turtle by the tail and carefully put it in a large burlap bag. The turtle is aptly named "snapper"—and those jaws are dangerous. One mistake will make you aware of this for years to come!

Most turtle hunters keep the turtles in a large tank or barrel for several days, and clean them up well before butchering them (and butchering turtles is a whole story in itself). A big snapper dresses out a lot of meat—some say it has a taste like chicken—and is mighty good on the table. The meat in the spring, after a winter's hibernation, is far too strong, so it is pretty much a late fall activity. Now, if that old blacksmith friend of mine has a piece of old well rod lying around . . . □

FROM THE

Warden's diary

By Rex Emerson
Law Enforcement Supervisor

A PHONE CALL AT NINE O'CLOCK last night from a reliable witness told me about a deer that had been shot. The caller had observed a man, whom he personally knew, shoot this deer with a rifle just before dark. A reliable witness is a person who has given information in the past that resulted in a prosecution or information that has proven to be correct. With this kind of information from a reliable witness it is not necessary to reveal his name to get a search warrant. Without people giving us information, we couldn't possible hold down the poaching.

It was not known whether the deer poacher had taken the deer out of the woods at the time that he shot it. He might go back and get it late at night, so it was decided not to act too quickly. This violator is usually a loner, which means he won't be dividing the meat up with some other person. Without that kind of information and prior knowledge about the violator, I would have been out there in the woods trying to find the deer and would have spent a cold night waiting for someone to come after it.

This morning another officer, Steve Messinger, was called and we got a search warrant from the judge. You never, but never, serve a search warrant alone. In this case I was wishing there were more than two of us before it was over.

The deer poacher was not a farmer, but he did live in a house out in the country. When we arrived at his house there was no one home. We prefer that someone is at home when we conduct a serach, so we decided to wait down the road, where we could see the house and driveway. The man didn't have a job, so it was hard to tell where he was, or at what time he would get home. We had been there about an hour when a pickup truck came down the road from behind us. When he saw our car he stopped and started to turn around. We recognized him as the man we were waiting for. I whipped our car around and headed toward him, with the red light on. It was taking him too long to get his pickup turned around so he gave it up and stopped. We blocked him off with our car and bailed out. He had a big buck deer in the back end. There was a bullet hole in the head of the deer. We took a closer look at it. This deer was still warm and the blood was fresh. There was some dried blood there on the floor of the pickup which substantiated our earlier report. We told him to drive on down to the house, that we wanted to talk to him about another deer that he had gotten yesterday evening. But of course he didn't know what we were talking about.

When he stopped in his driveway we read him the search warrant and told him to open the house door. We found the deer we were originally after, lying on the floor in the basement. It had been field dressed, but still had the hide on it. A stiff deer, with its long legs, is a little bit hard to get through doors. The violator didn't help any, but he followed us out and watched us load it on top of the trunk of our car. We weren't watching him as closely as we should have. Just as we started to pull the second deer out of his pickup, he pulled a shotgun out of the cab and jacked a shell into the barrel. As he did this he said, "You're not takin' my deer!" He looked up before he raised the shotgun, and found he was looking down the barrels of two .38 cal. pistols. My partner, Steve, can pull his gun faster than any man I ever saw. We told him to drop the shotgun. We spread out so he couldn't get both of us and told him again to put the gun down. He stood there for what seemed like an eternity and then decided to put it down. The whole episode probably didn't take much more than a minute, but it was a little hairy for that minute. We took him and his deer to town.

You would think when the judge levies a fine of $100 for each illegally taken deer that people would decide it would be cheaper to buy beef. We now have a liquidated damage law that adds $300 to the fine for each illegally taken deer. This $300 per deer goes into the Conservation Fish and Game protection fund. I could buy a lot of beefsteak for $400. But, "Everyone to his own taste" the old lady said as she kissed the cow. □

Classroom Corner

by Robert Rye

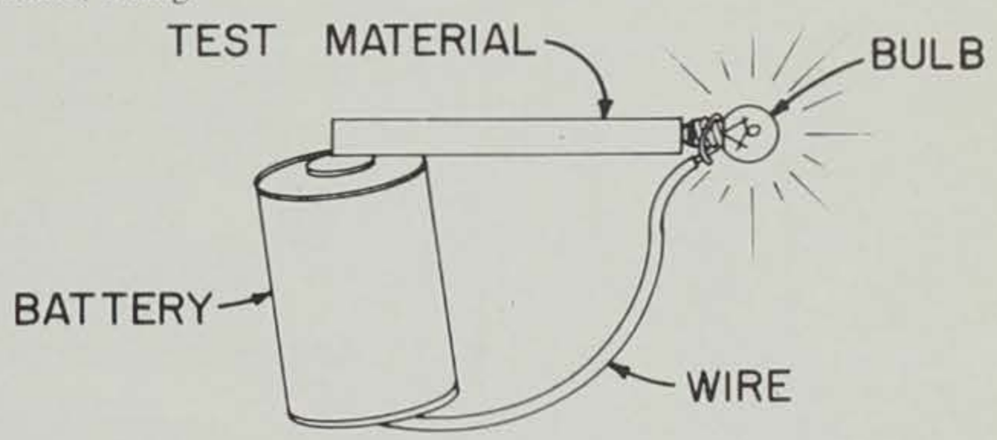
A LOOK INTO ONE'S THOUGHTS at this time of year, finds some universal ideas. Are we going to have enough fuel for the furnace? Will the car start? Where did all the static electricity come from? How much snow will we get?

First, where does electricity come from? It can come from a number of other fuels: solar - from the sun; geothermal - from the earth; hydro - from water; and fossel fuels which are coal and oil. We are changing one form of energy to another. These forms of energy can be used to turn a turbine which in turn produces electricity.

From the starting point where electricity is produced to where we use it, the electricity flows in wires. For many of us this idea is hard to understand. Let us visualize a similar example - water. It flows through a hose (like the electricity in a wire). When the hose is full of water, it comes out the end as soon as the water is turned on. This is just like turning on a light switch.

This hose full of water helps us to comprehend the idea that electricity, the electrons of an atom, are already in the wire. The electrons that move are the ones held loosely by the atom.

We can easily tell what materials hold their electrons tightly. Place some of the following listed materials between a flashlight battery and the bulb: a rubber band, a stick, a piece of cloth, a safety pin, a belt buckle, a ring.



If the bulb lights, the material holds the electrons loosely. If it doesn't light, it holds the electrons tightly. Can you find any similarities?

Current electricity can be dangerous to study and batteries are sometimes hard to get, so let's try a few things with static electricity. This is electricity (electrons) which aren't flowing.

During this cold time of year there is little humidity in the air. Humidity (water) will carry electrons from one place to another and not let them pile up in one place. The spark we notice when this pile of electrons jumps from one place to another is evidence of static electricity.

We can create static electricity by friction. Dragging your feet is friction. Try another kind of friction. Take your plastic comb and run it through your hair. You now have a pile of extra electrons on the comb which you took from your hair. Take the comb and bring it close to, but not touching, a pile of papers (about ¼ inch by ¼ inch in size). What happens? If you were watching closely you should have observed first the paper moved **away** from and then toward the comb.

Why does that happen? Like charged objects repel each other. In this experiment they are alike because both have plenty of electrons. But once the "extra" electrons moved to the other side of the pile they were unlike. Unlike objects attract like a magnet.

Other experiments can be done with electricity. More ideas can be explored — why does electricity strike any object? Does lightning go up or down? How do we get light from electricity? How do we get heat?

The study of electricity helps us appreciate our natural resources. Many of them, such as beauty, elbowroom, and recreation are hard to describe like electricity. These all fall into a category called environmental education. Environmental education in some way fits into every subject you study. This is one reason we have the Conservation Education Center. We attempt to help every person who uses the facilities to see that we have only one environment and all living things depend upon it. Your Iowa Conservation Commission is here to help make it better for you. □

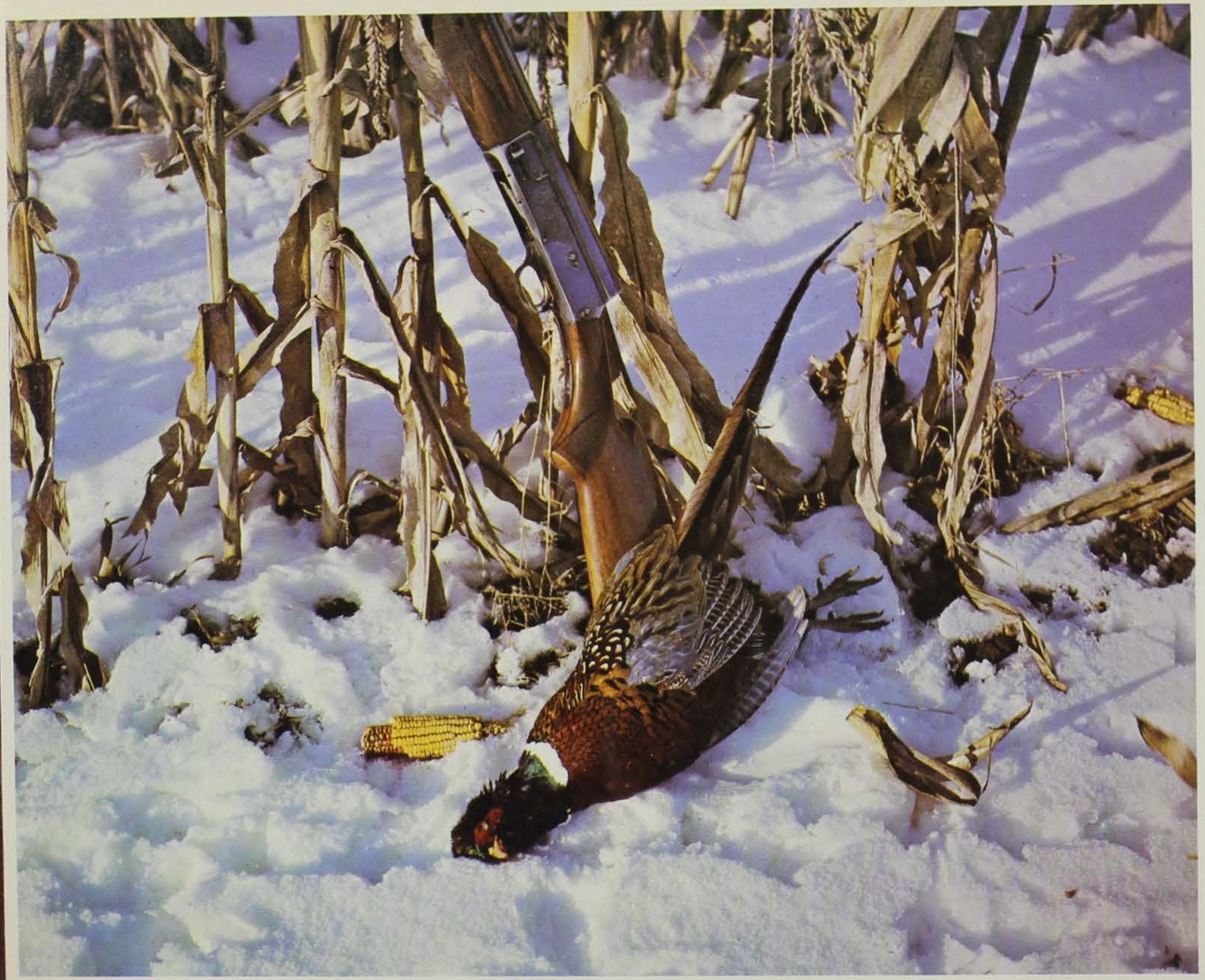


Photo by Ken Formanek